WHAT IS CLAIMED IS:

1   1. A method comprising the steps of:

2   identifying an operating characteristic based on a number of commands queued in an

3   instruction buffer; and

4   adjusting a system characteristic based on the operating characteristic, wherein a power

5   consumption is modified based on the system characteristic.

1   2. The method as in Claim 1, wherein the steps are performed through set of discrete components.

1   3. The method as in Claim 1, wherein the commands queued in the command buffer, of the number

2   of commands, include instructions to be processed by a processor associated with the system.

1   4. The method as in Claim 1, wherein the instructions include display instructions.

1   5. The method as in Claim 1, wherein the operating characteristic includes a number of pending

2   operations.

1   6. The method as in Claim 1, wherein the operating characteristic includes fill rate associated with

2   the instruction buffer.

1   7. The method as in Claim 1, wherein the operating characteristic includes a type of instructions in

2   the instruction buffer.

1   8. The method as in Claim 1, wherein the step of adjusting the system characteristic includes

2   altering the number of bits used to represent multimedia data.

1   9. The method as in Claim 8, wherein the multimedia data includes video data.

1   10. The method as in Claim 8, wherein the multimedia data includes audio data.

1   11. The method as in Claim 1, wherein the step of adjusting the system characteristic includes

2   reducing clock speed used to process commands.

1   12. The method as in Claim 11, wherein a nominal power provided to the system is altered to match

2   an amount of power needed for the speed used.

1   13. The method as in Claim 11, wherein a number of bits used to represent multimedia data is

2   reduced.

1   14. The method as in Claim 13, wherein the multimedia data includes video data.

1   15. The method as in Claim 13, wherein the multimedia data includes audio data.

1   16. The method as in Claim 1, wherein the step of adjusting the system characteristic includes

2   altering a nominal power provided to the system.

1   17. The method as in Claim 16, wherein a clock speed changed to match a change in the nominal

2   power.

1   18. The method as in Claim 16, wherein a number of bits used to represent multimedia data is

2   changed to match a change in the nominal power.

1   19. The method as in Claim 18, wherein the multimedia data includes video data.

1   20. The method as in Claim 18, wherein the multimedia data includes audio data.

1   21. The method as in Claim 1, wherein the operating characteristic is based on buffer fullness.

1   22. The method as in Claim 21, wherein the step of adjusting the system characteristic includes
2   reducing a clock speed when the buffer fullness is less than a predetermined buffer fullness.

1   23. The method as in Claim 21, wherein the step of adjusting the system characteristic includes
2   reducing a maximum power provided to the system when the buffer fullness is less than a
3   predetermined buffer fullness.

1   24. The method as in Claim 21, wherein the step of adjusting the system characteristic includes
2   reducing a number of bits to represent multimedia data when the buffer fullness is less than a
3   predetermined buffer fullness.

1   25. The method as in Claim 21, wherein the step of adjusting the system characteristic includes
2   increasing a clock speed when the buffer fullness is greater than a predetermined buffer
3   fullness.

1   26. The method as in Claim 21, wherein the step of adjusting the system characteristic includes
2   increasing a maximum power provided to the system when the buffer fullness is greater than
3   a predetermined buffer fullness.

1   27. The method as in Claim 21, wherein the step of adjusting the system characteristic includes

2   increasing a number of bits to represent multimedia data when the buffer fullness is greater

3   than a predetermined buffer fullness.

1   28. A system comprising:

2   an instruction buffer to store pending instructions;

3   an buffer monitor to:

4   track a buffer statistic;

5   provide a buffer status of said buffer statistic to a power threshold;

6   a power module to initiate a power conservation feature based on said buffer status.

1   29. The system as in Claim 28, further including a threshold register to store a statistic threshold.

1   30. The system as in Claim 29, wherein said buffer status includes a comparison between said
2   buffer statistic and said statistic threshold.

1   31. The system as in Claim 28, wherein said pending instructions include multimedia instructions.

1   32. The system as in Claim 31, wherein said multimedia instructions include display instructions.

1   33. The system as in Claim 31, wherein the multimedia instructions include audio processing
2   instructions.

1   34. The system as in Claim 28, wherein said buffer statistic includes a fullness of said instruction
2   buffer.

1   35. The system as in Claim 28, wherein said buffer statistic includes a number of pending
2   instructions in said instruction buffer.

1   36. The system as in Claim 28, wherein said buffer statistic includes a rate of change in a number of

2   pending instructions in said instruction buffer.

1   37. The system as in Claim 28, wherein said buffer statistic includes types of instructions in said

2   instruction buffer.

1   38. A computer readable medium tangibly embodying a program of instructions to manipulate a
2   data processor to:
3   identify an operating characteristic based on a number of instructions queued in an
4   instruction buffer; and
5   adjust a system characteristic based on the operating characteristic, wherein a power
6   consumption is modified based on the system characteristic.

1   39. The computer readable medium as in Claim 38, wherein the operating characteristic includes a
2   rate of change in the number of instructions queued in the instruction buffer.

1   40. The computer readable medium as in Claim 38, wherein the operating characteristic includes a
2   type of instructions of the instructions queued in the instruction buffer.

1   41. The computer readable medium as in Claim 38, wherein the system characteristic includes a
2   number of bits used to represent multimedia data.

1   42. The computer readable medium as in Claim 41, wherein the system characteristic includes a
2   clock speed used to process the instructions.

1   43. The computer readable medium as in Claim 38, wherein the system characteristic includes a
2   supported power.